



SEQUENCE LISTING

<110> Palombella, Vito J.
Liao, Sha-Mei

<120> MEKK1 Molecules and Uses Thereof

<130> 103576.144

<140> US 09/697,898

<141> 2000-10-27

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Ile Ser Glu Arg Leu Ala Ser Ile Ser Val Gly Pro Ser Ser Ser Thr	930	935	940	
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Ser Gly Gly Arg Glu Arg Ala Asp Trp Arg Arg Arg Gln Leu Arg Lys
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Val Arg Ser Val Glu Leu Asp Gln Leu Pro Glu Gln Pro Leu Phe Leu
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Ala Ala Pro Asp Ser Gly Ala Ser Ser Pro Ala Ala Ala Glu Pro Gly
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Glu Lys Arg Ala Pro Ala Ala Glu Pro Ser Pro Ala Ala Ala Pro Ala
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Gly Arg Glu Met Glu Asn Lys Glu Thr Leu Lys Gly Leu His Lys Met
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Cys Met Pro Ala Trp Lys His Glu Trp Leu Glu Arg Arg Asn Arg Arg
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Glu Pro Ser Asp Pro Met Leu Trp Arg Lys Thr Leu Lys Asn Phe Glu						
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Val Glu Ser Leu Phe Gln Lys Tyr His Ser Arg Arg Ser Ser Arg Ile						
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Lys Ala Pro Ser Arg Asn Thr Ile Gln Lys Phe Val Ser Arg Met Ser						
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Gly Met Leu Asp Glu Glu Ser Leu Thr Val Cys Glu Asp Gly Cys Arg						
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Asn Lys Leu His His His Cys Met Ser Ile Trp Ala Glu Glu Cys Arg						
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Arg Asn Arg Glu Pro Leu Ile Cys Pro Leu Cys Arg Ser Lys Trp Arg						
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Ser His Asp Phe Tyr Ser His Glu Leu Ser Ser Pro Val Asp Ser Pro						
		500		505		510
Ser Ser Leu Arg Ala Ala Gln Gln Gln Thr Val Gln Gln Gln Pro Leu						
		515		520		525
Ala Gly Ser Arg Arg Asn Gln Glu Ser Asn Phe Asn Leu Thr His Tyr						
		530		535		540

Gly Thr Gln Gln Ile Pro Pro Ala Tyr Lys Asp Leu Ala Glu Pro Trp
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Ile Gln Val Phe Gly Met Glu Leu Val Gly Cys Leu Phe Ser Arg Asn
 565 570 575

Trp Asn Val Arg Glu Met Ala Leu Arg Arg Leu Ser His Asp Val Ser
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Gly Ala Leu Leu Leu Ala Asn Gly Glu Ser Thr Gly Asn Ser Gly Gly
 595 600 605

Ser Ser Gly Ser Ser Pro Ser Gly Gly Ala Thr Ser Gly Ser Ser Gln
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Thr Ser Ile Ser Gly Asp Val Val Glu Ala Cys Cys Ser Val Leu Ser
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Met Val Cys Ala Asp Pro Val Tyr Lys Val Tyr Val Ala Ala Leu Lys
 645 650 655

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Val Leu Asn Cys Ile Leu Gly Asn Gln Thr Glu Ser Asn Asn Trp Gln
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Glu Leu Leu Gly Arg Leu Cys Leu Ile Asp Arg Leu Leu Leu Glu Phe
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Pro Ala Glu Phe Tyr Pro His Ile Val Ser Thr Asp Val Ser Gln Ala
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 Gln Asp Ser Phe Leu Gln Ala Ser Val Pro Asn Asn Tyr Leu Glu Thr
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 Thr Glu Asn Ser Ser Pro Glu Cys Thr Val His Leu Glu Lys Thr Gly
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 Lys Gly Leu Cys Ala Thr Lys Leu Ser Ala Ser Ser Glu Asp Ile Ser
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 Glu Arg Leu Ala Ser Ile Ser Val Gly Pro Ser Ser Ser Thr Thr Thr
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 Thr Thr Thr Thr Thr Glu Gln Pro Lys Pro Met Val Gln Thr Lys Gly
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 Arg Pro His Ser Gln Cys Leu Asn Ser Ser Pro Leu Ser His His Ser
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 Gln Leu Met Phe Pro Ala Leu Ser Thr Pro Ser Ser Ser Thr Pro Ser
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Asn Thr Ser Lys Gln Gly Asp 1070	Pro Ser Lys Asn 1075	Ser Met Thr Leu 1080
Asp Leu Asn Ser Ser Ser Lys 1085	Cys Asp Asp Ser 1090	Phe Gly Cys Ser 1095
Ser Asn Ser Ser Asn Ala Val 1100	Ile Pro Ser Asp 1105	Glu Thr Val Phe 1110
Thr Pro Val Glu Glu Lys Cys 1115	Arg Leu Asp Val 1120	Asn Thr Glu Leu 1125
Asn Ser Ser Ile Glu Asp Leu 1130	Leu Glu Ala Ser 1135	Met Pro Ser Ser 1140
Asp Thr Thr Val Thr Phe Lys 1145	Ser Glu Val Ala 1150	Val Leu Ser Pro 1155
Glu Lys Ala Glu Asn Asp Asp 1160	Thr Tyr Lys Asp 1165	Asp Val Asn His 1170
Asn Gln Lys Cys Lys Glu Lys 1175	Met Glu Ala Glu 1180	Glu Glu Glu Ala 1185
Leu Ala Ile Ala Met Ala Met 1190	Ser Ala Ser Gln 1195	Asp Ala Leu Pro 1200
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Asn	Thr	Ser	Ser	Glu	Gln	Glu	Glu	Val	Val	Glu	Ala	Leu	Arg	Glu
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Glu	Ile	Arg	Met	Met	Ser	His	Leu	Asn	His	Pro	Asn	Ile	Ile	Arg
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Met	Leu	Gly	Ala	Thr	Cys	Glu	Lys	Ser	Asn	Tyr	Asn	Leu	Phe	Ile
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Glu	Trp	Met	Ala	Gly	Gly	Ser	Val	Ala	His	Leu	Leu	Ser	Lys	Tyr
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Gly	Ala	Phe	Lys	Glu	Ser	Val	Val	Ile	Asn	Tyr	Thr	Glu	Gln	Leu
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Leu	Arg	Gly	Leu	Ser	Tyr	Leu	His	Glu	Asn	Gln	Ile	Ile	His	Arg
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Gly	Thr	Gly	Ala	Gly	Glu	Phe	Gln	Gly	Gln	Leu	Leu	Gly	Thr	Ile
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Ala	Phe	Met	Ala	Pro	Glu	Val	Leu	Arg	Gly	Gln	Gln	Tyr	Gly	Arg
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Ser	Cys	Asp	Val	Trp	Ser	Val	Gly	Cys	Ala	Ile	Ile	Glu	Met	Ala
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Cys	Ala	Lys	Pro	Pro	Trp	Asn	Ala	Glu	Lys	His	Ser	Asn	His	Leu
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Ala Leu Ile Phe Lys Ile Ala Ser Ala Thr Thr Ala Pro Ser Ile
 1460 1465 1470

Pro Ser His Leu Ser Pro Gly Leu Arg Asp Val Ala Leu Arg Cys
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Lys His Pro Val Phe Arg Thr Thr Trp
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 35 40 45

Val Glu Leu Asp Gln Leu Pro Glu Gln Pro Leu Phe Leu Ala Ala Ser
 50 55 60

Pro Pro Ala Ser Ser Thr Ser Pro Ser Pro Glu Pro Ala Asp Ala Ala
 65 70 75 80

Gly Ser Gly Thr Gly Phe Gln Pro Val Ala Val Pro Pro Pro His Gly
 85 90 95

Ala Ala Ser Arg Arg Gly Ala His Leu Thr Glu Ser Val Ala Ala Pro
 100 105 110

Asp Ser Gly Ala Ser Ser Pro Ala Ala Ala Glu Pro Gly Glu Lys Arg
 115 120 125

Ala Pro Ala Ala Glu Pro Ser Pro Ala Ala Ala Pro Ala Gly Arg Glu
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Met Glu Asn Lys Glu Thr Leu Lys Gly Leu His Lys Met Asp Asp Arg
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Pro Glu Glu Arg Met Ile Arg Glu Lys Leu Lys Ala Thr Cys Met Pro
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Ala Trp Lys His Glu Trp Leu Glu Arg Arg Asn Arg Arg Gly Pro Val

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Leu	Ala	Ala	Glu	Ser	Pro	Gly	Glu	Val	Gln	Ala	Ser	Ala	Ala	Ser	Pro
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Ala	Ser	Lys	Gly	Arg	Arg	Ser	Pro	Ser	Pro	Gly	Asn	Ser	Pro	Ser	Gly
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Arg	Thr	Val	Lys	Ser	Glu	Ser	Pro	Gly	Val	Arg	Arg	Lys	Arg	Val	Ser
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Pro	Val	Pro	Phe	Gln	Ser	Gly	Arg	Ile	Thr	Pro	Pro	Arg	Arg	Ala	Pro
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Ser	Pro	Asp	Gly	Phe	Ser	Pro	Tyr	Ser	Pro	Glu	Glu	Thr	Asn	Arg	Arg
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Val	Asn	Lys	Val	Met	Arg	Ala	Arg	Leu	Tyr	Leu	Leu	Gln	Gln	Ile	Gly
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Ile	His	Leu	Leu	Phe	Val	Met	Leu	Arg	Val	Phe	Gln	Leu	Glu	Pro	Ser
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Asp	Pro	Met	Leu	Trp	Arg	Lys	Thr	Leu	Lys	Asn	Phe	Glu	Val	Glu	Ser
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Leu	Phe	Gln	Lys	Tyr	His	Ser	Arg	Arg	Ser	Ser	Arg	Ile	Lys	Ala	Pro
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Ser	Arg	Asn	Thr	Ile	Gln	Lys	Phe	Val	Ser	Arg	Met	Ser	Asn	Ser	His
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Thr	Leu	Ser	Ser	Ser	Ser	Thr	Ser	Thr	Ser	Ser	Ser	Glu	Asn	Ser	Ile
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Lys	Asp	Glu	Glu	Glu	Gln	Met	Cys	Pro	Ile	Cys	Leu	Leu	Gly	Met	Leu
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Glu	Pro	Leu	Ile	Cys	Pro	Leu	Cys	Arg	Ser	Lys	Trp	Arg	Ser	His	Asp
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Phe	Tyr	Ser	His	Glu	Leu	Ser	Ser	Pro	Val	Asp	Ser	Pro	Ser	Ser	Leu
				485					490					495	

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 Gln Ile Pro Pro Ala Tyr Lys Asp Leu Ala Glu Pro Trp Ile Gln Val
 530 535 540
 Phe Gly Met Glu Leu Val Gly Cys Leu Phe Ser Arg Asn Trp Asn Val
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 Arg Glu Met Ala Leu Arg Arg Leu Ser His Asp Val Ser Gly Ala Leu
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 580 585 590
 Ser Ser Pro Ser Gly Gly Ala Thr Ser Gly Ser Ser Gln Thr Ser Ile
 595 600 605
 Ser Gly Asp Val Val Glu Ala Cys Cys Ser Val Leu Ser Met Val Cys
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 Ala Asp Pro Val Tyr Lys Val Tyr Val Ala Ala Leu Lys Thr Leu Arg
 625 630 635 640
 Ala Met Leu Val Tyr Thr Pro Cys His Ser Leu Ala Glu Arg Ile Lys
 645 650 655
 Leu Gln Arg Leu Leu Gln Pro Val Val Asp Thr Ile Leu Val Lys Cys
 660 665 670
 Ala Asp Ala Asn Ser Arg Thr Ser Gln Leu Ser Ile Ser Thr Leu Leu
 675 680 685
 Glu Leu Cys Lys Gly Gln Ala Gly Glu Leu Ala Val Gly Arg Glu Ile
 690 695 700
 Leu Lys Ala Gly Ser Ile Gly Ile Gly Gly Val Asp Tyr Val Leu Asn
 705 710 715 720
 Cys Ile Leu Gly Asn Gln Thr Glu Ser Asn Asn Trp Gln Glu Leu Leu
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 Gly Arg Leu Cys Leu Ile Asp Arg Leu Leu Leu Glu Phe Pro Ala Glu
 740 745 750
 Phe Tyr Pro His Ile Val Ser Thr Asp Val Ser Gln Ala Glu Pro Val
 755 760 765
 Glu Ile Arg Tyr Lys Lys Leu Leu Ser Leu Leu Thr Phe Ala Leu Gln
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 Ser Ile Asp Asn Ser His Ser Met Val Gly Lys Leu Ser Arg Arg Ile
 785 790 795 800
 Tyr Leu Ser Ser Ala Arg Met Val Thr Thr Val Pro His Val Phe Ser

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Ser	Ile	Glu	Asp	Leu	Leu	Glu	Ala	Ser	Met	Pro	Ser	Ser	Asp	Thr
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Thr	Val	Thr	Phe	Lys	Ser	Glu	Val	Ala	Val	Leu	Ser	Pro	Glu	Lys
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Lys	Cys	Lys	Glu	Lys	Met	Glu	Ala	Glu	Glu	Glu	Glu	Ala	Leu	Ala
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Ile	Ala	Met	Ala	Met	Ser	Ala	Ser	Gln	Val	Ala	Leu	Pro	Ile	Val
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Pro	Gln	Leu	Gln	Val	Glu	Asn	Gly	Glu	Asp	Ile	Ile	Ile	Ile	Gln
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Gln	Asp	Thr	Pro	Glu	Thr	Leu	Pro	Gly	His	Thr	Lys	Ala	Lys	Gln
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Pro	Tyr	Arg	Glu	Asp	Thr	Glu	Trp	Leu	Lys	Gly	Gln	Gln	Ile	Gly
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Leu	Gly	Ala	Phe	Ser	Ser	Cys	Tyr	Gln	Ala	Gln	Asp	Val	Gly	Thr
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Gly	Thr	Leu	Met	Ala	Val	Lys	Gln	Val	Thr	Tyr	Val	Arg	Asn	Thr
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Arg	Met	Met	Ser	His	Leu	Asn	His	Pro	Asn	Ile	Ile	Arg	Met	Leu
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Gly	Ala	Thr	Cys	Glu	Lys	Ser	Asn	Tyr	Asn	Leu	Phe	Ile	Glu	Trp
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Met	Ala	Gly	Gly	Ser	Val	Ala	His	Leu	Leu	Ser	Lys	Tyr	Gly	Ala
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Phe	Lys	Glu	Ser	Val	Val	Ile	Asn	Tyr	Thr	Glu	Gln	Leu	Leu	Arg
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Ile	Ala	Asp	Phe	Gly	Ala	Ala	Ala	Arg	Leu	Ala	Ser	Lys	Gly	Thr
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Gly	Ala	Gly	Glu	Phe	Gln	Gly	Gln	Leu	Leu	Gly	Thr	Ile	Ala	Phe
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Lys Pro Pro Trp Asn Ala Glu Lys His Ser Asn His Leu Ala Leu		
1430	1435	1440
Ile Phe Lys Ile Ala Ser Ala Thr Thr Ala Pro Ser Ile Pro Ser		
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His Leu Ser Pro Gly Leu Arg Asp Val Ala Leu Arg Cys Leu Glu		
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Ser Ala Gly Arg Glu Arg Ala Asp Trp Arg Arg Gln Gln Leu Arg Lys		
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Val Arg Ser Val Glu Leu Asp Gln Leu Pro Glu Gln Pro Leu Phe Leu		
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Thr Ala Ser Pro Pro Cys Pro Ser Thr Ser Pro Ser Pro Glu Pro Ala		
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Asp Ala Ala Ala Gly Ala Ser Gly Phe Gln Pro Ala Ala Gly Pro Pro		
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Pro Pro Gly Ala Ala Ser Arg Cys Gly Ser His Ser Ala Glu Leu Ala		
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Ala Ala Arg Asp Ser Gly Ala Arg Ser Pro Ala Gly Ala Glu Pro Pro		
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Ser Ala Ala Ala Pro Ser Gly Arg Glu Met Glu Asn Lys Glu Thr Leu		
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Lys Gly Leu His Lys Met Asp Asp Arg Pro Glu Glu Arg Met Ile Arg		

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Val	Ser	Arg	Met	Ser	Asn	Cys	His	Thr	Leu	Ser	Ser	Ser	Ser	Thr	Ser	
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Arg Ser Lys Trp Arg Ser His Asp Phe Tyr Ser His Glu Leu Ser Ser
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 Thr Asp Val Ser Gln Ala Glu Pro Val Glu Ile Arg Tyr Lys Lys Leu
 770 775 780
 Leu Ser Leu Leu Ala Phe Ala Leu Gln Ser Ile Asp Asn Ser His Ser

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	805	810		815		
Val Thr Thr	Val Pro Pro	Leu Phe	Ser Lys	Leu Val Thr	Met Leu	Ser
	820	825		830		
Ala Ser Gly	Ser Ser His	Phe Ala	Arg Met	Arg Arg	Arg Leu	Met Ala
	835	840		845		
Ile Ala Asp	Glu Val Glu	Ile Ala	Glu Val	Ile Gln	Leu Gly	Ser Glu
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Asp Thr Leu	Asp Gly Gln	Gln Asp	Ser Ser	Gln Ala	Leu Ala	Pro Pro
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Arg Tyr Pro	Glu Ser Ser	Ser Leu	Glu His	Thr Ala	His Val	Glu Lys
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Thr Gly Lys	Gly Leu Lys	Ala Thr	Arg Leu	Ser Ala	Ser Ser	Glu Asp
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Ile Ser Asp	Arg Leu Ala	Gly Val	Ser Val	Gly Leu	Pro Ser	Ser Ala
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Thr Thr Glu	Gln Pro Lys	Pro Thr	Val Gln	Thr Lys	Gly Arg	Pro His
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Ser Gln Cys	Leu Asn Ser	Ser Pro	Leu Ser	Pro Pro	Gln Leu	Met Phe
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Lys Ile Pro	Ser Ala Ser	Pro Gln	Thr Gln	Arg Lys	Phe Ser	Leu Gln
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Phe Gln Arg	Thr Cys Ser	Glu Asn	Arg Asp	Ser Glu	Lys Leu	Ser
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Pro Val Phe	Thr Gln Ser	Arg Pro	Pro Pro	Ser Ser	Asn Ile	His
1025		1030		1035		
Arg Ala Lys	Ala Ser Arg	Pro Val	Pro Gly	Ser Thr	Ser Lys	Leu
1040		1045		1050		
Gly Asp Ala	Ser Lys Asn	Ser Met	Thr Leu	Asp Leu	Asn Ser	Ala
1055		1060		1065		
Ser Gln Cys	Asp Asp Ser	Phe Gly	Ser Gly	Ser Asn	Ser Gly	Ser
1070		1075		1080		
Ala Val Ile	Pro Ser Glu	Glu Thr	Ala Phe	Thr Pro	Ala Glu	Asp
1085		1090		1095		

Lys	Cys	Arg	Leu	Asp	Val	Asn	Pro	Glu	Leu	Asn	Ser	Ser	Ile	Glu
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Asp	Leu	Leu	Glu	Ala	Ser	Met	Pro	Ser	Ser	Asp	Thr	Thr	Val	Thr
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Phe	Lys	Ser	Glu	Val	Ala	Val	Leu	Ser	Pro	Glu	Lys	Ala	Glu	Ser
	1130					1135					1140			
Asp	Asp	Thr	Tyr	Lys	Asp	Asp	Val	Asn	His	Asn	Gln	Lys	Cys	Lys
	1145					1150					1155			
Glu	Lys	Met	Glu	Ala	Glu	Glu	Glu	Glu	Ala	Leu	Ala	Ile	Ala	Met
	1160					1165					1170			
Ala	Met	Ser	Ala	Ser	Gln	Asp	Ala	Leu	Pro	Ile	Val	Pro	Gln	Leu
	1175					1180					1185			
Gln	Val	Glu	Asn	Gly	Glu	Asp	Ile	Ile	Ile	Ile	Gln	Gln	Asp	Thr
	1190					1195					1200			
Pro	Glu	Thr	Leu	Pro	Gly	His	Thr	Lys	Ala	Asn	Glu	Pro	Tyr	Arg
	1205					1210					1215			
Glu	Asp	Thr	Glu	Trp	Leu	Lys	Gly	Gln	Gln	Ile	Gly	Leu	Gly	Ala
	1220					1225					1230			
Phe	Ser	Ser	Cys	Tyr	Gln	Ala	Gln	Asp	Val	Gly	Thr	Gly	Thr	Leu
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Met	Ala	Val	Lys	Gln	Val	Thr	Tyr	Val	Arg	Asn	Thr	Ser	Ser	Glu
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Gln	Glu	Glu	Val	Val	Glu	Ala	Leu	Arg	Glu	Glu	Ile	Arg	Met	Met
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Ser	His	Leu	Asn	His	Pro	Asn	Ile	Ile	Arg	Met	Leu	Gly	Ala	Thr
	1280					1285					1290			
Cys	Glu	Lys	Ser	Asn	Tyr	Asn	Leu	Phe	Ile	Glu	Trp	Met	Ala	Gly
	1295					1300					1305			
Ala	Ser	Val	Ala	His	Leu	Leu	Ser	Lys	Tyr	Gly	Ala	Phe	Lys	Glu
	1310					1315					1320			
Ser	Val	Val	Ile	Asn	Tyr	Thr	Glu	Gln	Leu	Leu	Arg	Gly	Leu	Ser
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Tyr	Leu	His	Glu	Asn	Gln	Ile	Ile	His	Arg	Asp	Val	Lys	Gly	Ala
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Glu	Phe	Gln	Gly	Gln	Leu	Leu	Gly	Thr	Ile	Ala	Phe	Met	Ala	Pro

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 Trp Asn Ala Glu Lys His Ser Asn His Leu Ala Leu Ile Phe Lys
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 35 40 45
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 50 55 60
 Gln Leu Arg Lys Val Arg Ser Val Glu Leu Asp Gln Leu Pro Glu Gln
 65 70 75 80
 Pro Leu Phe Leu Ala Ala Ala Ser Pro Pro Cys Pro Ser Thr Ser Pro
 85 90 95
 Ser Pro Glu Pro Ala Asp Ala Ala Ala Gly Ala Ser Arg Phe Gln Pro
 100 105 110
 Ala Ala Gly Pro Pro Pro Pro Gly Ala Ala Ser Arg Cys Gly Ser His
 115 120 125
 Ser Ala Glu Leu Ala Ala Ala Arg Asp Ser Gly Ala Arg Ser Pro Ala
 130 135 140
 Gly Ala Glu Pro Pro Ser Ala Ala Ala Pro Ser Gly Arg Glu Met Glu

145		150		155		160
Asn Lys Glu Thr	Leu Lys Gly Leu His	Lys Met Glu Asp Arg	Pro Glu			
	165	170	175			
Glu Arg Met Ile	Arg Glu Lys Leu Lys Ala Thr Cys Met	Pro Ala Trp				
	180	185	190			
Lys His Glu Trp	Leu Glu Arg Arg Asn Arg Arg Gly	Pro Val Val Val				
	195	200	205			
Lys Pro Ile Pro	Ile Lys Gly Asp Gly Ser Glu Val Asn Asn Leu Ala					
	210	215	220			
Ala Glu Pro Gln Gly	Glu Gly Gln Ala Gly Ser Ala Ala Pro Ala Pro					
225	230	235	240			
Lys Gly Arg Arg	Ser Pro Ser Pro Gly Ser Ser Pro Ser Gly Arg Ser					
	245	250	255			
Val Lys Pro Glu	Ser Pro Gly Val Arg Arg Lys Arg Val Ser Pro Val					
	260	265	270			
Pro Phe Gln Ser	Gly Arg Ile Thr Pro Pro Arg Arg Ala Pro Ser Pro					
	275	280	285			
Asp Gly Phe Ser	Pro Tyr Ser Pro Glu Glu Thr Ser Arg Arg Val Asn					
	290	295	300			
Lys Val Met Arg	Ala Arg Leu Tyr Leu Leu Gln Gln Ile Gly Pro Asn					
305	310	315	320			
Ser Phe Leu Ile	Gly Gly Asp Ser Pro Asp Asn Lys Tyr Arg Val Phe					
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Ile Gly Pro Gln	Asn Cys Ser Cys Gly Arg Gly Ala Phe Cys Ile His					
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Leu Leu Phe Val	Met Leu Arg Val Phe Gln Leu Glu Pro Ser Asp Pro					
	355	360	365			
Met Leu Trp Arg	Lys Thr Leu Lys Asn Phe Glu Val Glu Ser Leu Phe					
	370	375	380			
Gln Lys Tyr His	Ser Arg Arg Ser Ser Arg Ile Lys Ala Pro Ser Arg					
385	390	395	400			
Asn Thr Ile Gln	Lys Phe Val Ser Arg Met Ser Asn Ser His Thr Leu					
	405	410	415			
Ser Ser Ser Ser	Thr Ser Thr Ser Ser Ser Glu Asn Ser Ile Lys Asp					
	420	425	430			
Glu Glu Glu Gln	Met Cys Pro Ile Cys Leu Leu Gly Met Leu Asp Glu					
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Glu Ser Leu Thr	Val Cys Glu Asp Gly Cys Arg Asn Lys Leu His His					
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His Cys Met Ser Ile Trp Ala Glu Glu Cys Arg Arg Asn Arg Glu Pro
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 Leu Ile Cys Pro Leu Cys Arg Ser Trp Arg Ser His Asp Phe Tyr Ser
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 His Glu Leu Ser Ser Pro Val Glu Ser Pro Ala Ser Leu Arg Ala Val
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 Gln Gln Pro Ser Ser Pro Gln Gln Pro Val Ala Gly Ser Gln Arg Arg
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 Asn Gln Glu Ser Ser Phe Asn Leu Thr His Phe Gly Thr Gln Gln Ile
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 Pro Ser Ala Tyr Lys Asp Leu Ala Glu Pro Trp Ile Gln Val Phe Gly
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 Met Glu Leu Val Gly Cys Leu Phe Ser Arg Asn Trp Asn Val Arg Glu
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 Leu Ser Ala Gly Ala Ala Ser Gly Ser Ser Gln Pro Ser Ile Ser Gly
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 Asp Val Val Glu Ala Cys Cys Ser Val Leu Ser Ile Val Cys Ala Asp
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 Pro Val Tyr Lys Val Tyr Val Ala Ala Leu Lys Thr Leu Arg Ala Met
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 690 695 700
 Cys Lys Gly Gln Ala Gly Glu Leu Ala Val Gly Arg Glu Ile Leu Lys
 705 710 715 720
 Ala Gly Ser Ile Gly Val Gly Gly Val Asp Tyr Val Leu Ser Cys Ile
 725 730 735
 Leu Gly Asn Gln Ala Glu Ser Asn Asn Trp Gln Glu Leu Leu Gly Arg
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			900					905						910	
Ala	Ser	Ser	Glu	Asp	Ile	Ser	Asp	Arg	Leu	Ala	Gly	Val	Ser	Val	Gly
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Glu Val Leu Arg Gly Gln Gln Tyr Gly Arg Ser Cys Asp Val Trp				
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Ser Val Gly Cys Ala Ile Ile Glu Met Ala Cys Ala Lys Pro Pro				
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Trp Asn Ala Glu Lys His Ser Asn His Leu Ala Leu Ile Phe Lys				
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His Thr Lys Ala Lys Gln Pro Tyr Arg Glu Asp Thr
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